Agenda

General Program Updates

- Opening Remarks
- Position Recruitments

Subaccount Funding Status

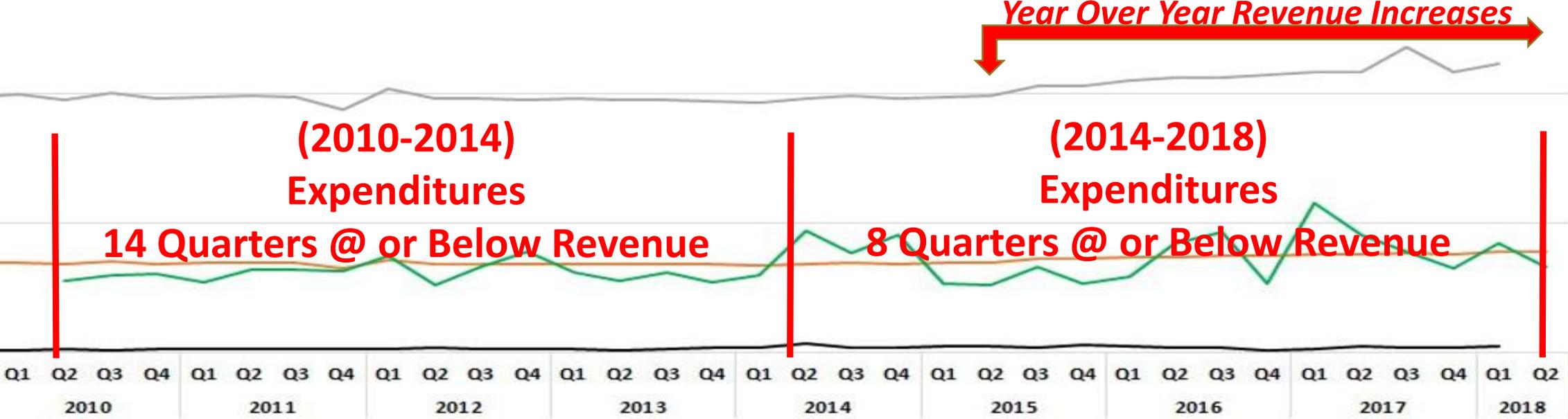- Tax Collection Revenue & Expenditures
- 2019 Expenditure Projections

Status - Standards Implementation

- Administrative Rule Adoption
- Administrative Rule Hearing Testimony Themes
- CPE Workstation Funding Policy

GIS Program Area Update

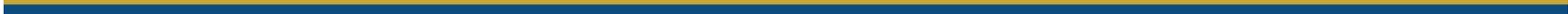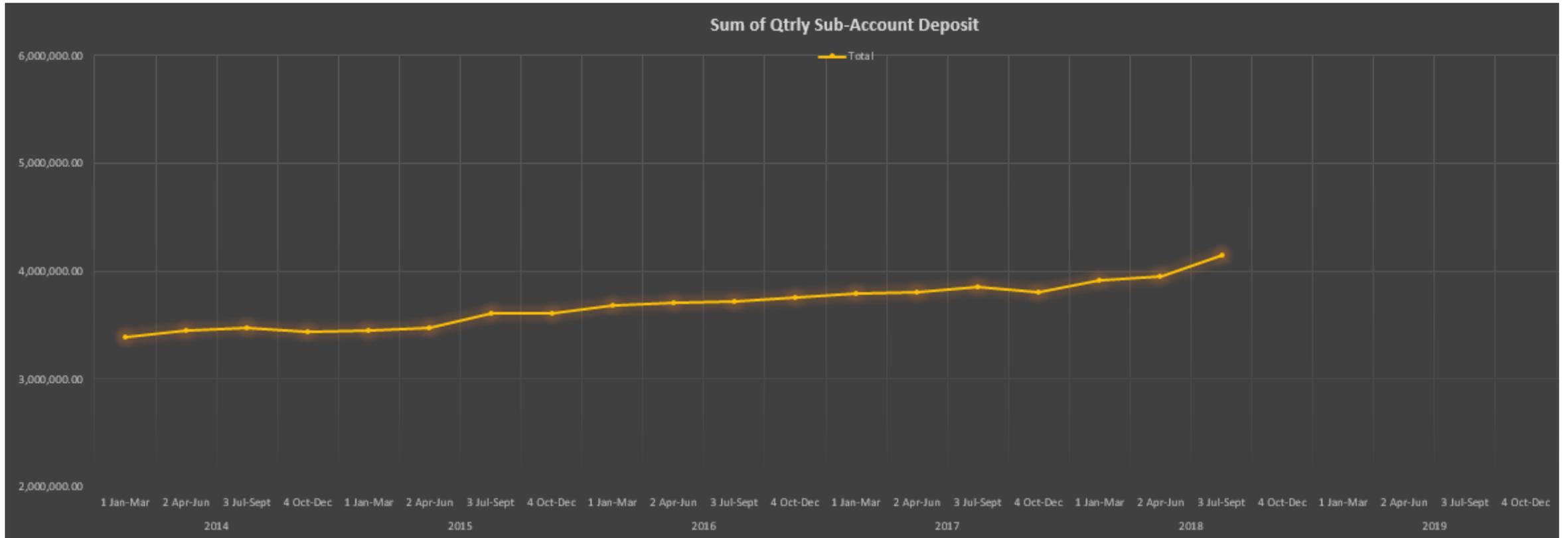# Recap - 9-1-1 Subaccount Expenditures:

- Concerns surrounding the ability of the 9-1-1 subaccount to sustain recurring Legacy E9-1-1 and CPE lifecycle replacement cost demands

- Trend demonstrates difficulty recovering from periods of overinvestment during previous quarters

Year Over Year Revenue Increases

(2010-2014)
Expenditures
14 Quarters @ or Below Revenue

(2014-2018)
Expenditures
8 Quarters @ or Below Revenue

| Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 |
| 2010 | | | | 2011 | | | | 2012 | | | | 2013 | | | | 2014 | | | | 2015 | | | | 2016 | | | | 2017 | | | | 2018 | |

9-1-1 Subaccount – Increased Demand
(2010-2018)

1. Growth in the number of CPE workstations statewide
2. Funding for secondary MIS systems
3. Increased costs for mapping hardware, software and licensing
4. Annual ALI record count true-ups
5. One-time and recurring Text-to-9-1-1 costs
6. Higher engineering, implementation and project management costs associated with CPE lifecycle replacements
7. Increase in disbursement levels for GIS/MSAG
8. Reimbursements for increased CPE maintenance services levels at select PSAPs
9. Repurchase vs. renewal of CPE licenses due to changing manufacturer brands
10. New CPE pocket dial feature hardware, software and annual maintenance
11. Advanced phone system licensing associated with ACD environments
12. Call center phone queueing activity display hardware, software and licensing
13. TARIFF rate increases in call delivery circuit and infrastructure services
14. General inflation of all subaccount products/services

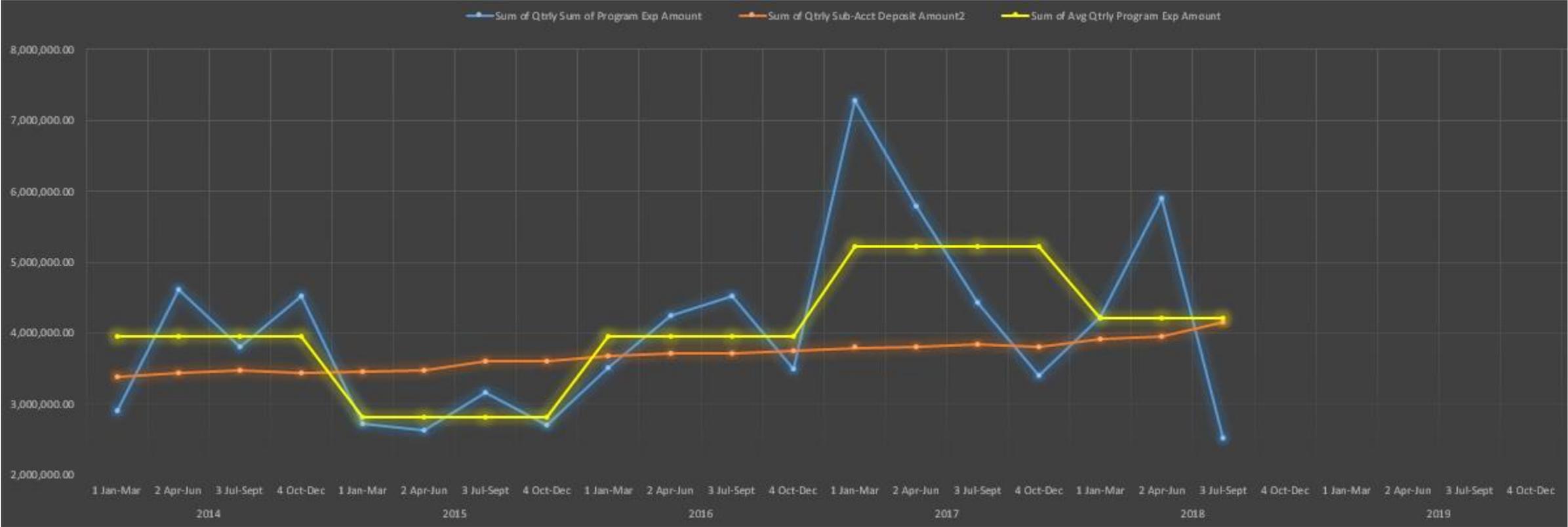# 9-1-1 Subaccount Quarterly Deposits
(2014-2018)

Sum of Qtrly Sub-Account Deposit

9-1-1 Subaccount Quarterly Deposits & Expenditures
## (2014-2018)
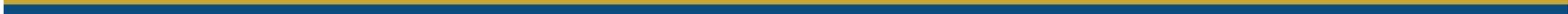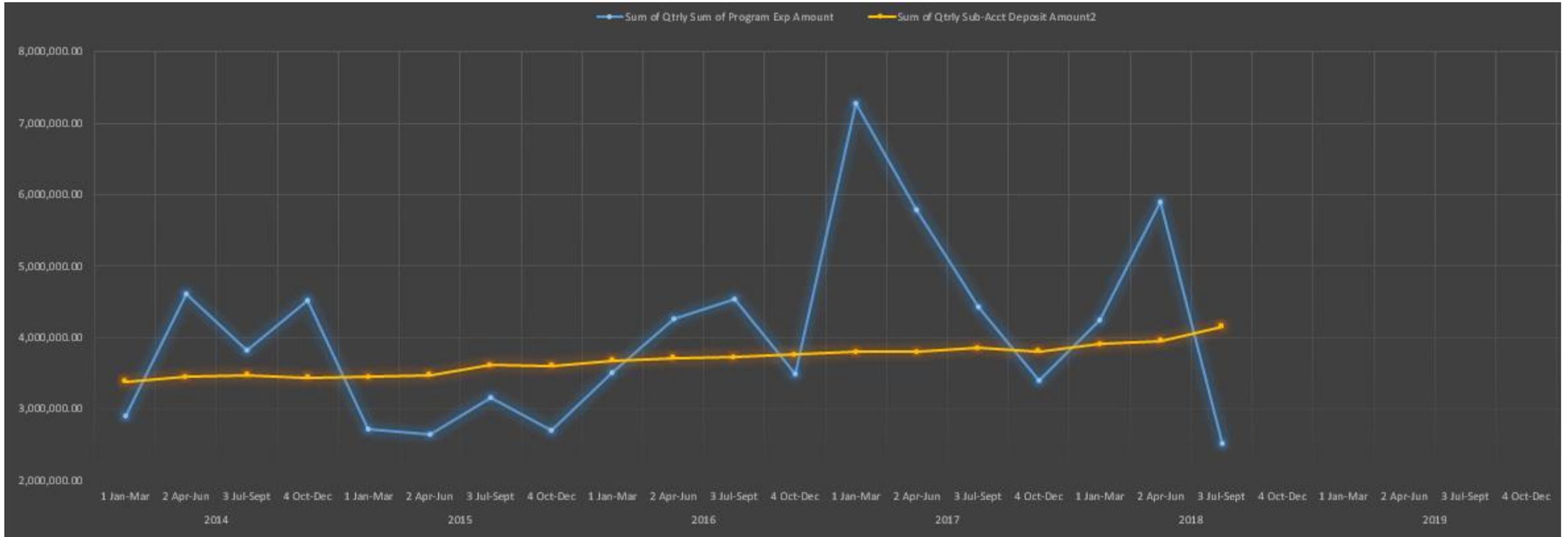
9-1-1 Subaccount Average Annual Expenditures
(2014-2018)

Subaccount Budget Projection – (2019)

	Service Type	Percent of Total Account	Cost
	9-1-1 Subaccount - Annual Revenue		**$16,613,992**
1	ALI, SR & IP Network *(CTL & FTR)*	58.29%	$9,684,000
2	Prior Investments (Outstanding CPE Invoices)	6.02%	$1,000,000
3	Statewide MIS *(ECaTS) Maint. Only*	.69%	$114,660
4	GIS/MSAG	9.32%	$1,547,859
5	Phone/EM/ES Circuit Services	15.02%	$2,494,691
6	UPS Maintenance	1.20%	$199,992
7	Text-to-9-1-1	.57%	$95,069
8	CPE – Maintenance	5.99%	$994,689
9	CPE – Replacement (1x$)	2.90%	*Any Remaining Funds*
	TOTAL Remaining Funds		**$483,032**

2019 Subaccount Revenue & Recurring Cost Projection
(*Excluding* CPE Lifecycle Replacements)
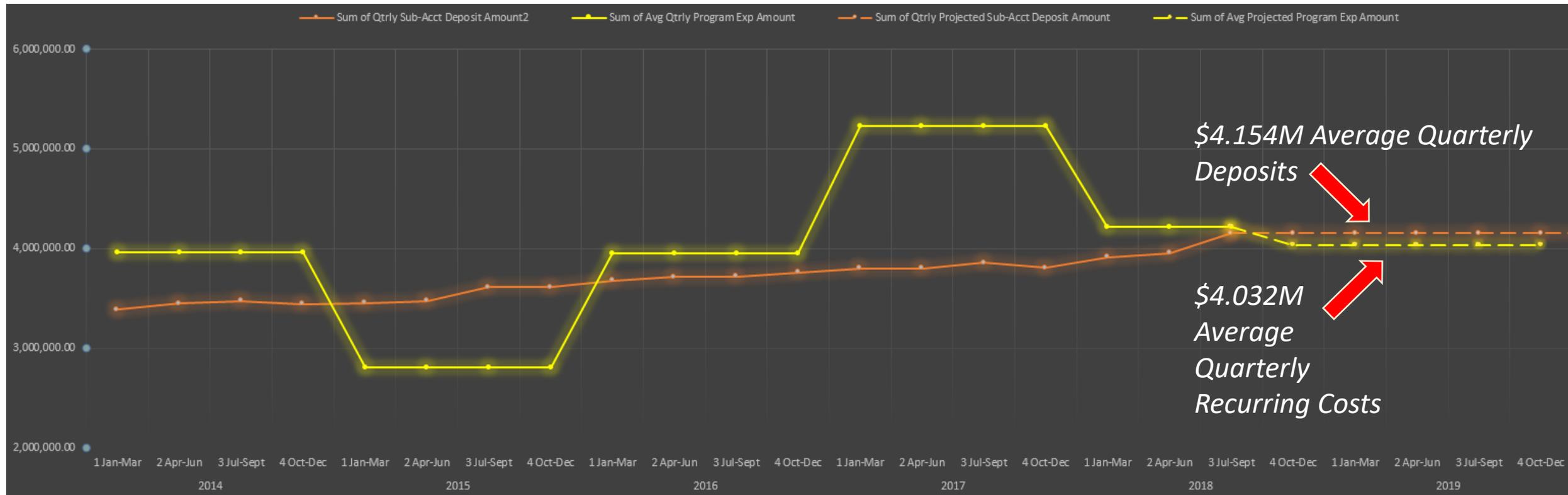
PSAP CPE Lifecycle Replacement Schedule

- Please review your individual PSAP CPE contracts to verify accuracy of dates

- Report any prior installation date discrepancies to the State 9-1-1 Program for review/update

| County	Name of PSAP	Last Installation Date	Lifecycle Replacement Year 5	Lifecycle Replacement Year 6
Curry	Brookings Police Department	4/20/2016	4/22/2021	4/22/2022
Curry	Curry County Sheriff's Office	7/13/2016	7/14/2021	7/14/2022
DPSST	DPSST		7/11/2017	7/11/2018
Grant	John Day Police Department	11/18/2015	11/18/2020	11/18/2021
Harney	Burns Police Department	6/22/2016	8/22/2021	8/22/2022
Jefferson	Warm Springs Police Department	7/1/2014	7/29/2019	7/29/2020
Lake	Lakeview Police Department	3/15/2018	3/14/2023	3/14/2024
Lane	South Lane County 9-1-1 (SoLCOMM)	4/12/2017	4/11/2022	4/11/2023
Lincoln	Toledo Police Department	11/1/2014	11/11/2019	11/11/2020
Umatilla	Milton-Freewater Police Department	9/1/2014	9/9/2019	9/9/2020
Wallowa	Wallowa County Sheriff's Office	6/15/2016	6/16/2021	6/16/2022
Baker	Baker Co Consolidated 9-1-1 Dispatch	11/14/2018	11/14/2023	11/14/2024
Clatsop	Astoria Police Department	5/1/2014	5/6/2019	5/6/2020
Clatsop	South Clatsop County Communications	1/1/2015	1/27/2020	1/27/2021
Coos	Coos Bay Police Department	5/18/2016	5/23/2021	5/23/2022
Crook	Prineville Police Department	7/19/2017	7/19/2022	7/19/2023
Lane	Florence Police Department	2/1/2017	1/31/2022	1/31/2023
Lincoln	Lincoln City Police Department	12/1/2014	12/2/2019	12/2/2020
Malheur	Malheur County Sheriff's Office	3/28/2018	3/27/2023	3/27/2024
Tillamook	Tillamook Co. Emergency Comm District	12/16/2015	2/21/2021	2/21/2022
Union	Union County Communications	5/4/2016	5/5/2021	5/5/2022
Yamhill	Newberg Police Dept/9-1-1 Center	2/1/2017	2/2/2022	2/2/2023
Coos	Coos County Sheriff's Office	4/27/2016	4/28/2021	4/28/2022
Gilliam, Sherman, Wheeler, Jefferson	Frontier Communications	3/1/2013	3/1/2018	3/1/2019
Hood River	Hood River County Dispatch Center	10/5/2016	10/25/2021	10/25/2022
Klamath	Klamath County 9-1-1 Comm.	7/19/2017	7/18/2022	7/18/2023
Wasco	Wasco County Communications	6/22/2016	8/24/2021	8/24/2022
Benton	Corvallis Regional Comm. Center	6/1/2014	6/25/2019	6/25/2020
Columbia	Columbia 9-1-1 Comm. District	11/1/2014	11/11/2019	11/11/2020
Josephine	Josephine County 9-1-1 Agency	11/1/2014	11/4/2019	11/4/2020
Linn	Linn County Sheriff's Office	5/1/2013	5/1/2018	5/1/2019
Morrow	Morrow County Sheriff's Office	2/10/2016	3/10/2021	3/10/2022
Yamhill	Yamhill Communications (YCOM)	11/16/2016	11/17/2021	11/17/2022
Clackamas	Lake Oswego Communications	8/16/2017	8/16/2022	8/16/2023
Douglas	Douglas County 9-1-1	7/1/2014	7/15/2019	7/15/2020
Umatilla	Umatilla County Sheriff's Office	5/1/2014	5/24/2019	5/24/2020
Marion	METCOM	4/20/2016	4/30/2021	4/30/2022
Deschutes	Deschutes County 9-1-1	11/9/2016	11/9/2021	11/9/2022
Jackson	Emergency Communications of Sothern Oregon	11/1/2013	11/6/2018	11/6/2019
Clackamas	Clackamas County Communications	3/6/2017	3/14/2022	3/14/2023
Lane	Central Lane Communications	11/1/2017	11/1/2022	11/1/2023
Marion, Polk, Lincoln	Willamette Valley Comm. Center	7/1/2012	7/1/2017	7/1/2018
Washington	Washington County Consolidated Communication	10/3/2017	10/9/2022	10/9/2023
Multnomah	Bureau of Emergency Communications	11/7/2017	11/6/2022	11/6/2023

Planned CPE Lifecycle Replacement Cost Estimates (2019)

WVCC *(no loss of workstations)* -	$1,068,426
Baker *(no loss of workstations)* -	$300,000
DPSST *(no loss of workstations)* -	$100,000
Corvallis (*reduction of 1* workstation) -	$500,000
Linn *(no loss of workstations)* -	$500,000
Frontier (no loss of workstations) -	$500,000
Astoria (*eligible 1 additional* workstation) -	$500,000
ECSO (*reduction of 4* workstations) -	$700,000 *Q4 2019*

$ 4,168,426

2019 Subaccount Budget Projection + CPE

	Service Type	Percent of Total Account	Cost	
	9-1-1 Subaccount - Annual Revenue			**$16,613,992**
1	ALI, SR & IP Network *(CTL & FTR)*	58.29%	$9,684,000	
2	Prior Investments (Outstanding CPE Invoices)	6.02%	$1,000,000	
3	Statewide MIS *(ECaTS)* Maint. Only	.69%	$114,660	
4	GIS/MSAG	9.32%	$1,547,859	
5	Phone/EM/ES Circuit Services	15.02%	$2,494,691	
6	UPS Maintenance	1.20%	$199,992	
7	Text-to-9-1-1	.57%	$95,069	
8	CPE – Maintenance	5.99%	$994,689	
9	CPE – Replacement (1x$)		$4,168,426	
	TOTAL Remaining Funds			**-$3,685,394**

2019 Subaccount Revenue & Recurring Cost Projection
(Including CPE Lifecycle Replacements)
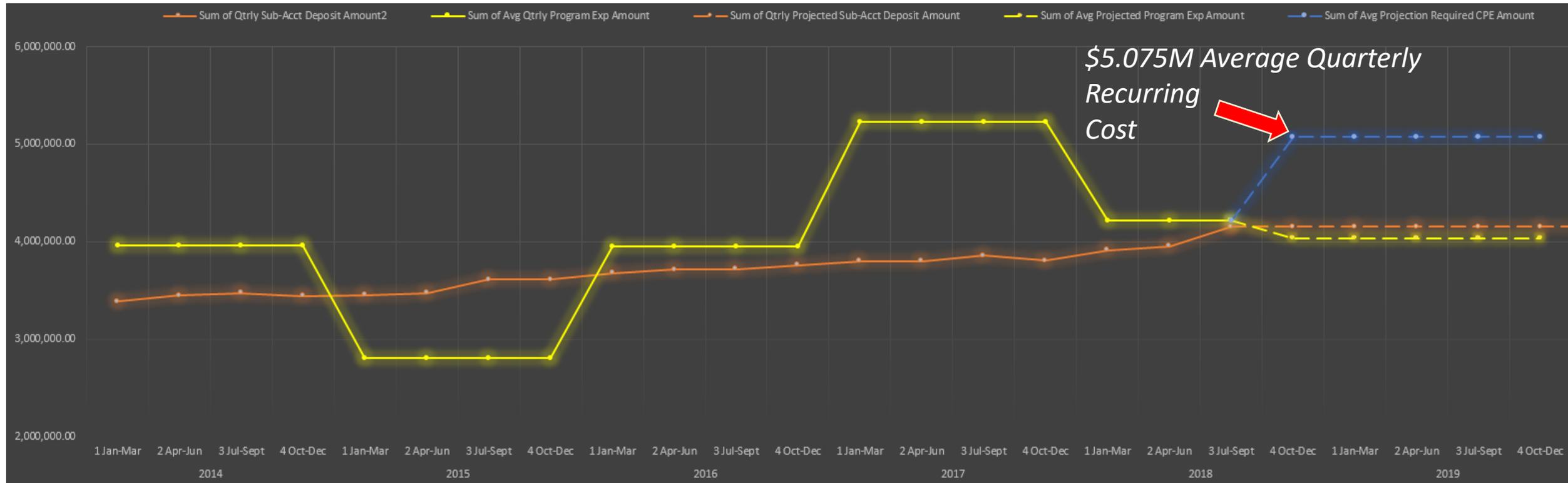
Next Steps:

- State 9-1-1 Program provide CPE Workstation Allocation Methodology cost/benefit – data included within this presentation

- State 9-1-1 Program consulting Advisory Committee - seeking further opportunities beyond recently adopted CPE standards to reduce demand on the subaccount

- Local Oregon APCO/NENA Chapter – Continue Financial Analysis

- ORS 403.240 *(4)* – The Office shall provide Emergency Communications Account funding to 9-1-1 Jurisdictions - ***Subject to the availability of funds***.

Questions?

Administrative Rule – CPE Standards Update

Administrative Rule Update

- Statewide PSAP community recognized need for CPE standards including a methodology for funding workstations since 2009

- Multiple workgroup attempts unsuccessful

- State 9-1-1 Program raised subaccount funding limitations – May 2018

- New rules adopted November 2, 2018

Rule Making Hearing
Public Testimony Themes

- Erlang Not Applicable to 9-1-1 Centers

- Rushed Decision – Not Enough Time

- Workstation Methodology – Large 9-1-1 Center Inequity - Receiving Greatest Reductions

- Unknown Cost Impact or Benefit

Oregon Erlang Clarified – Additional Factors

In an effort to provide clarification on the use of Erlang for Oregon, the State 9-1-1 Program has not only applied the base Erlang formula and associated formula factors, we have included _several additional factors_ to ensure we maximize the number of workstations allocated to PSAPs statewide.

Additional factors above base Erlang C Formula include:

- Includes the average of the ten highest busy hours each month, over the previous _18-month period_

- Call duration is based upon each individual PSAP actual duration/performance (not averaged statewide)

- _Call volume results will be doubled_ to account for abandoned calls – Call volume results include 100% of all calls

- _Sixty seconds added_ to the average monthly call processing time to account for call transfers, referrals and wrap-up time

- In addition, _one supervisor workstation added for every eight eligible workstations_

Erlang Not Applicable to 9-1-1 Centers?

Erlang referenced and used nationally in 9-1-1 industry:

- <u>APCO Project Retains Effective Practices Guide</u> – "Erlang formulas are considered the standard for any process that requires an application of queuing theory, such as the nonlinear arrival times of incoming calls in a call center. The Erlang formulas use a statistical solution that addresses the randomness of call arrival times."

- <u>NENA PSAP Staff Guidelines Worksheet for Primary PSAPs</u> is based on call volume and the use of Erlang

- 9-1-1 industry consultants, other neighboring states and large PSAP jurisdictions continue to use Erlang for the basis of determining staffing, trunking and the allocation of phone system workstations within a 9-1-1 center

- Oregon PSAPs use of Erlang to justify prior requests for additional workstations

Rushed Decision – Rulemaking Period Not Enough Time

- Inability of the subaccount to sustain current recurring funding demand raised concerns and demonstrated the critical need to take action quickly

- Oregon Erlang formula/factors placed within OEM Policy, not OAR.

- No reduction in workstations will be experienced as a result of the rules taking effect until 7/1/2019. Corvallis will be the first with the reduction of 1 eligible workstation.

- Commitment to the Advisory Committee to continue evaluating further objective and fair factors and/or formula refinements to Oregon Earlang.

- State 9-1-1 Program will seek data driven input to ensure an objective allocation of subaccount funding statewide

Workstation Allocation Methodology: Large 9-1-1 Center Inequity

- Oregon Erlang formula and factors applied consistently statewide.
  - ➤ *Call duration is the only formula factor (specific to each PSAP) included within Oregon Erlang*

- OAR 104-080-165 requires each PSAP to maintain a minimum of 2 workstations regardless of call volume.

- State 9-1-1 Program commitment to continued partnership with the State Advisory Committee looking for further objective and fair factors and/or formula refinements to Oregon Erlang

- The State 9-1-1 Program is evaluating phone system architecture, phone circuits, call types and phone system call capacity & processing requirements
  - ➤ This will include analysis of local government general information and 2-1-1 call processing requirements vs. emergency communications call volume for each phone system funded by the 9-1-1 subaccount

Unknown Cost Impact or Benefit

- To what level will the new rules reduce demand on the subaccount?

- What CPE costs will be eligible for subaccount funding under the new administrative rules?

- What CPE costs will not be eligible for subaccount funding under the new administrative rules?

- Will the PSAP have responsibility for any backroom equipment costs?

Eligible Costs Under Oregon Erlang Allocation

– Emergency Call Processing Servers, server licensing and backroom equipment *(excludes product licensing tied to any ineligible workstations)*

– Initial one time costs for eligible workstation hardware, software, implementation, project management and field engineering

– Vendor software support and onsite maintenance for eligible workstations

PSAP Cost Responsibility Under Oregon Erlang Allocation

- Any product licensing tied to ineligible workstations

- Initial one time costs associated with any additional workstation hardware, software, implementation, project management and field engineering above the number of workstations provided under Oregon Erlang

- Vendor software support & onsite maintenance associated with any additional workstations above Oregon Erlang allocation

Note: Any product/service costs not quoted per workstation will be apportioned equally against total number of eligible and ineligible workstations

CPE Workstation Allocation Cost Impact Analysis:
26 of 43 PSAPs Experience Eligibility Adjustments

PSAP	CURRENT # WS's	Oregon ERLANG	# SUPERVISOR WORKSTATIONS	Workstation Delta	Eligibility Cost Impact
01_Astoria	3	4	0	1	$39,203.51
03_Brookings PD	2	3	0	1	$39,203.51
04_BOEC (1)	50	17	2	31	-$950,415.98
05_Central Lane	17	10	1	6	-$235,221.06
06_Clackamas County	14	10	1	3	-$117,610.53
07_Columbia County	5	4	0	1	-$39,203.51
10_Corvallis	5	4	0	1	-$39,203.51
11_Curry County	2	3	0	1	$39,203.51
12_Deschutes	13	8	1	4	-$156,814.04
14_ECSO	13	9	1	3	-$117,610.53
16_Harney County	2	3	0	1	$39,203.51
17_Hood River	4	3	0	1	-$39,203.51
18_John Day	2	3	0	1	$39,203.51
19_Josephine County	5	6	0	1	$39,203.51
20_Klamath 9-1-1	4	5	0	1	$39,203.51
21_Lake ETSB	2	3	0	1	$39,203.51
22_Lake Oswego	6	5	0	1	-$39,203.51
26_METCOM	9	6	0	3	-$117,610.53
28_Morrow County	5	3	0	2	-$78,407.02
32_South Lane	2	3	0	1	$39,203.51
33_Tillamook	3	4	0	1	$39,203.51
35_Umatilla	6	5	0	1	-$39,203.51
37_Wallowa County	2	3	0	1	$39,203.51
38_Warm Springs	2	3	0	1	$39,203.51
39_Wasco County	4	3	0	1	-$39,203.51
40_Washington County	22	12	1	9	-$352,831.59
42_Willamette Valley (2)	18	12	1	5	$0.00
Total:				-62	-$1,891,300.22

(1) Workstation Cost based upon actual cost resulting from 2017 lifecycle replacement (@ $30,658.58 per workstation)

(2) Receiving replacement early 2019. Budgetary lifecycle estimate 2023-2024 ($196,017)

CPE Workstation Allocation Cost Impact Analysis Summary

- Oregon Erlang Cumulative Lifecycle Cost Impact - <u>$1,852,096</u>
  - Based on 2017/2018 averaged CPE Product/Service Pricing – Similar size PSAPs

- Will require a full 6 year CPE lifecycle to realize full impact/benefit

- 75% of total workstation reductions not experienced until 2022-2023

- Average quarterly subaccount demand reduction - <u>$77,170</u>
  - 6 years – 24 quarters

PSAP Budgetary Considerations

- Per-position cost of $39,203 per position is only an estimate based upon the most recent available pricing

- Averaging used to provide median cost for each workstation product and/or service

- Questions remain regarding an individual PSAPs desire to retain and fund any ineligible workstations or if any eligible workstations will be requested

- Obtaining quotes closest to your lifecycle replacement date will provide the most accurate representation of costs

Questions?

CPE Workstation Allocation Policy Overview

CPE Workstation Allocation Policy

- Copy of the policy provided today

- Copy made available on OEM website

- Two webinars will be scheduled to review the policy
  - ➢ Wednesday, December 12, 2018 – 10:00 a.m.
  - ➢ Wednesday, January 9, 2018 – 10:00 a.m.

Payment Authorization Form

- Form Overview

- Located within CPE Workstation Allocation Policy

- OAR 104-080-0200: *A request for reimbursement must be for costs incurred for products and services provided to the 9-1-1 jurisdiction in the previous calendar quarter*

- *Phone service associated with 9-1-1 call delivery specific to a PSAP, ALI, Selective Routing, MPLS network services do not require the use of this form*

- *Form also made available on the OEM website*

Contact Pat Lustig for any additional questions or support as it pertains to the policy

Questions?

GIS Update

- Currently becoming familiar with processes and policy for the responsibilities of the 9-1-1 GIS Coordinator

- Improving position tools and procedures utilized to assist in processing GIS/MSAG requests and information for the PSAPS and counties statewide

- Identifying and working towards data analysis tools and methods, and the ability to ensure data compliance and improvement

Questions?

Additional Information:

- Continue providing feedback and support through your regional State 9-1-1 Advisory Committee members

- OEM, State 9-1-1 Program Contact:

   Frank Kuchta, State 9-1-1 Program Manager

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   503-378-4620